

REMARKS

Claims 1-5, 7-9, 11 and 13-22 were pending as of the action mailed on September 12, 2008. Claims 1, 19 and 20 are in independent form. Claims 1, 19, and 20 have been amended for clarity. No new matter has been added by these amendments.

Reconsideration of the action is respectfully requested in light of the following remarks.

Rejections under 35 U.S.C. § 103

Claims 1-5, 7-8, 13, and 18-22 have been rejected under 35 U.S.C. § 103(a) as allegedly being obvious over U.S. Publication No. 2005/0113002 (“Chen”) in view of U.S. Patent No. 6,280,306 (“Hosoki”). The applicant respectfully traverses.

The applicant’s claims 1, 19, and 20, from which all other claims depend, recite that “a height of at least one of the vertical side-walls is substantially the same as a height of the ledge.” Chen describes a retaining ring with channels 304. Further, Hosoki describes a retainer ring 27 with a step portion 27(a). Both Chen and Hosoki are silent regarding a height of a vertical side-wall with respect to a height of a ledge. Even assuming arguendo that Chen and Hosoki were combined, the Examiner has not provided a clear reason to adjust the height of Chen’s channels or Hosoki’s step portion to be substantially the same.

As noted in the M.P.E.P., “[t]he key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious.” M.P.E.P. § 2143, Rev. 6, September 2007. As the Supreme Court has noted, “rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reason with some rational underpinning to support the legal conclusion of obviousness.” *KSR*, 127 S.Ct. 1727 (May 3, 2007) (quoting *In re Kahn*, 41 F.3d 977, 988 (Fed. Cir. 2006)).

The examiner argues that motivation to design the retaining ring wherein a height of at least one of the vertical side-walls is substantially the same as a height of the ledge is “so that the sidewalls will be flush with the ledge and decrease a change in force at the junction of the ledge and side-walls, thus maintaining force of the ring and thus uniform support/treatment of the

wafer.” The applicant respectfully requests that the examiner clarify this argument, as the applicant does not understand the underpinning for this line of reasoning. First, it is not clear what the examiner considers to be applying the force or what direction the force is applied. Second, there is no evidence to suggest that the force of the ring and/or uniform treatment of the wafer would be affected by a change in force at the junction of the ledge and sidewalls. Third, if the goal were to decrease a change in downward pressure applied by the carrier head at the junction of the ledge and the sidewalls, then the channel height would be reduced rather than made equal to the height of the ledge.

The examiner further argues that “it would have been [an] obvious matter of design choice to provide a retaining ring of the optimal support and treatment of the wafer.” However, the applicant respectfully submits that the examiner’s line of reasoning here is likewise specious. Design optimization of a retaining ring might give a particular height to a channel and/or ledge. Such optimization would not, however, lead a person having ordinary skill in the art to set the heights equal.

For at least these reasons, the applicant submits that the examiner has not met her burden of establishing a *prima facie* case of obviousness for independent claims 1, 19, and 20. Further, the applicant submits that claims 2-5, 7-8, 13, 18, and 21-22 are not obvious at least by virtue of their dependency.

Claims 1-3, 7-8, 10-13, 18-20, and 22 have been rejected under 35 U.S.C. § 103(a) as allegedly being obvious over U.S. Patent No. 6,419,567 (“Glashauser”) in view of Hosaki. The applicant respectfully traverses.

As noted in the office action response mailed June 9, 2008, Glashauser describes a retaining ring with a partially open chamber 350 (FIG. 8F). However, the partially open chamber of Glashauser does not extend “from the inner diameter surface to the outer diameter” as recited in independent claims 1 and 19-29. Further, Glashauser describes a single partially open chamber on a retaining ring and does not describe “a plurality of channels” as recited in claims 1 and 19-20. Hosaki does not cure either of these deficiencies. Moreover, although Hosaki describes a retaining ring with a step portion, neither Glashauser nor Hosaki recites that “a height of at least one of the vertical side-walls is substantially the same as a height of the ledge.” Even assuming arguendo that Glashauser shows channels and that Glashauser and

Hosaki were combined, the examiner has not put forth an underpinned reason to adjust the “channels” of Glashauser or the step portion of Hosaki be substantially the same. Rather, the examiner has repeated the arguments put forth with respect to the combination of Chen and Hosaki, which, as discussed above, do not establish a prima facie case of obviousness.

For at least these reasons, the applicant submits that the examiner has not met her burden of establishing a prima facie case of obviousness for independent claims 1, 19, and 20. Further, the applicant submits that claims 2-3, 8, 10-13, 18, and 22 are not obvious at least by virtue of their dependency.

Claim 9 has been rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Chen in view of Hosoki or over Glashauser in view of Hosoki. As discussed above, none of Chen, Glashauser, nor Hosaki teaches that “a height of at least one of the vertical side-walls is substantially the same as a height of the ledge” as recited in claim 1. Further, the examiner has not put forth an underpinned reason for adjusting the heights to be substantially equivalent. Thus, claim 9 is not obvious at least by virtue of its dependency on claim 1.

Claims 11 and 14-17 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over (Glashauser or Chen) in view of Hosoki and in further view of U.S. Publication No. 2003/0070757 (DeMeyer). As discussed above, none of Chen, Glashauser, nor Hosaki teaches that “a height of at least one of the vertical side-walls is substantially the same as a height of the ledge” as recited in claim 1. Further, the examiner has not put forth an underpinned reason for adjusting the heights to be substantially equivalent. DeMeyer does not cure these deficiencies. Thus, claims 11 and 14-17 are not obvious at least by virtue of their dependency on claim 1.

### **Conclusion**

For the foregoing reasons, the applicant submits that all the claims are in condition for allowance.

By responding in the foregoing remarks only to particular positions taken by the examiner, the applicant does not acquiesce with other positions that have not been explicitly addressed. In addition, the applicant’s selecting some particular arguments for the patentability of a claim should not be understood as implying that no other reasons for the patentability of that claim exist. Finally, the applicant’s decision to amend or cancel any claim should not be

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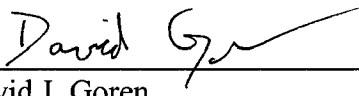
Attorney's Docket No.: 22558-0021001 / 8402/CPS

understood as implying that the applicant agrees with any positions taken by the examiner with respect to that claim or other claims.

The extension of time fees are being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any other credits or charges to Deposit Account No. 06-1050.

Respectfully submitted,

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